

Amra Delić

Faculty of Informatics, TU Wien Faculty of Electrical Engineering, University of Sarajevo

Email: amra.delic@tuwien.ac.at

Emerging Scholar Profile

I commenced my scholarship in the field of information technology and tourism only in late 2014, when I started my PhD in Vienna, Austria with Professor Hannes Werthner and Doctor Julia Neidhardt. Coming from Sarajevo, Bosnia & Herzegovina and growing up in an environment coloured by conflict and underdevelopment, I did not have the opportunity to discover this field earlier in my academic career. I began my academic career by studying Informatics at the Faculty of Electrical Engineering, University of Sarajevo. After finishing my master's degree, I worked as a software engineer for ERP solutions, and while valuing the exposure it gave me to the private sector, I quickly became unsatisfied with often unchallenging work. I became eager to try myself in a different setting, hence, I resolved to do a PhD in computer science. I relished the challenge presented by the shift from a largely process focused engineering role to a research paradigm focused on collaboration and problem solving.

At the beginning, due to my previous education and experiences, I was interested to research business process models, frameworks and automation. Nonetheless, having the opportunity to work so closely with one of the pioneers in the field of information technology and tourism, Professor Hannes Werthner, it did not take me long, nor was it a surprise when I became deeply engaged in the field. My PhD thesis is about travel-related group decision-making, and tourism group recommender systems, and it is a continuation of the work of Neidhardt et al., addressing the picture-based approach to recommender systems in the travel and tourism domain. What excites me the most about this work is the complexity of the tourism product, how people make decisions related to it, and how we could facilitate such a decision-making process.

Recommender systems, in general, aim to help their users to find items of interest in the online choice overload. Usually, the task of a recommender system is to make use of the



user's previous interactions with the system, in order to capture her preferences and to predict what the user might be interested in. However, in the travel and tourism domain, the task for a recommender system becomes quite complicated. First of all, there is the complexity of the tourism product, the risk it carries and the fact that it is rather an emotional experience. Secondly, but equally important, there is a question on how to elicit user preferences about such a product, which is the core of the recommendation engine. Understanding travelling as a group activity, as it usually is, imposes a whole new dimension onto the problem, which is occupying my attention for quite some time. In our research, and my PhD, we show how the variety of individual and group characteristics influence the group decision-making process when selecting a destination to visit together, which is only a small part of the overall decision-making process, but it provides strong evidence about the directions that the future research and the design of more efficient recommendation systems should follow. Therefore, I believe there is still a long and thrilling road ahead of us, in this particular topic.

Currently, I am a teaching assistant at the faculty of Electrical Engineering, University of Sarajevo, where I teach Machine Learning, Data Mining and Decision Support Systems, and I am finishing my PhD thesis at the Faculty of Informatics, TU Wien. At the same time, I am actively doing research in the field of group recommender systems, and user modelling in the travel and tourism domain. Moreover, I have been honoured to be invited to co-chair the RecSys Challenge 2020, which brings together researchers and practitioners in the RecSys community for ten years now to come up to new innovative solutions for the real-world recommendation tasks. Also, being passionately involved in the field of information technology and tourism, recently we have started a project named x3Light, in a cooperation between the Faculty of Electrical Engineering, University of Sarajevo, and the National Museum of Bosnia and Herzegovina, with the goal to develop an adaptive lightning framework that aims to optimize energy consumption and to enhance visitors' experience.

As my academic career evolves and progresses, I find I am increasingly involved in a great number of activities, but there seems to be less and less time for the kind that were done during my PhD, which sometimes I truly miss – exerting oneself in the full capacity just to make that small progress in a pretty tiny area was always fulfilling for me in terms of making a measurable contribution to the academic field. Until now, the journey was tough, but great and exciting, for which I am endlessly grateful to my supervisor, Professor Hannes Werthner, and a great number of people who worked with me, and who introduced to me the true meaning and value of research, and how to earnestly live it.